



#### ABSTRACT OF THE DISCLOSURE

PEM fuel cell performance losses caused by phenomena occurring during normal cell operation are recovered by periodically reducing the cathode potential to about 0.6 volts or less, and preferably to 0.1 volt or less. Once the cathode potential is reduced to the desired low level, it is maintained at or below that level for a period of time. The lower the potential to which the cathode is brought, the more quickly regeneration will occur. After regeneration, the cell, when returned to normal operation, will operate at a higher performance level.